



# Acer AL2216W Power Supply Capacitor Replacement

Replace bad capacitors in your Acer AL2216W monitor

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## INTRODUCTION

If your AL2216W is acting up, you probably need to replace the power supply capacitors. Here are some signs of bad capacitors.

### Replace all capacitors

- Power issues (This monitor has this issue)
- Video issues(Examples: Unstable image, Image drops when connected to a computer, does not play nice on higher resolutions, random image drops)
- Monitor turns off randomly and will not turn on without being unplugged and power drained
- Excessive transformer hum (This monitor has this issue)
- Excessive inverter hum (This monitor has this issue)
- Backlight does not work

### Partial capacitor replacement MAY work (but not recommended)

- Auto adjustment issues (This monitor has this issue)
- Power light is unstable (This problem is uncommon. Partial replacement MAY work.)

Note: Even if the issue can be fixed with a partial replacement, the issues will continue re-occurring until all of the capacitors are replaced.

### Original capacitor values (Supplied if you do not want to go up in uF and want to match the old caps)

- 25V 1000uF (x2)
- 10V 1000uF (x1)
- 25V 220uF (x2)



#### TOOLS:

- [Soldering Workstation](#) (1)
- [Jimmy](#) (1)
- [64 Bit Driver Kit](#) (1)



#### PARTS:

- [16v 2200uf capacitor](#) (1)
- [35v 220uf capacitor](#) (2)
- [10v 1000uf capacitor](#) (1)
- [35v 1000uf capacitor](#) (2)

## Step 1 — Discharging the old capacitors



- Unplug the cables from the monitor and let it sit for **24-48 hours**. This is to drain any residual power held by the capacitors. If you plan on doing a filter capacitor replacement, let the monitor sit for **5-7 days**. **Opening the monitor early is not suggested.**

⚠ Optional, but HIGHLY recommended: Build a [capacitor discharge tool](#) before opening the monitor to discharge the capacitors as an additional safety measure.

⚠ **The filter capacitor is the most dangerous and is the most prone to holding a residual charge.**

★ **For your own safety, if you are uncertain about handling these kinds of parts, follow all provided warnings. If you decide not to proceed, find a way to get it to someone who is willing to do the repair.**



## Step 2 — Remove the stand



- Remove the stand from the monitor. The 4 screws that have to be removed are marked. While you do not need to remove them in a specific order, it may be a good idea to start with the bottom screws and work your way up, so the stand does not fall on your person or get damaged.
- ⓘ When I got this monitor, the hinge cap was missing. If your hinge cap is still on your monitor, snap it off from the clips marked in black. Once this is done, it should come off with little to no fuss.



### Step 3 — Remove the back of the monitor



- Remove 4 fine threaded screws from the back of the monitor. There is no particular order you need to follow here, since the screws behind the panel are the same length and type.
- The screw marked in blue is different, and only goes in the marked location. Set this screw aside so you do not mix it up. This screw uses a different thread, so it will stand out from the other screws.

## Step 4 — Unlatching the bottom clips of the monitor



- On the bottom of the monitor, there are four slots to open the monitor. Put a Jimmy in these slots, pull the tool up and the back of the monitor will come off.
- ⓘ If you do not have a Jimmy, a flathead screwdriver will work as a substitute. Just keep in mind that it will damage the plastic to some extent. Because of this, only pull up the amount you need to reduce the damage to the plastic.
- ✦ If the monitor has never been opened or worked on, this will require more force to accomplish than a monitor that has previously been worked on.



## Step 5 — Unlocking the side clips



- With the monitor unclipped on the bottom, pull the sides of the monitor up. Do this slowly to avoid damaging the plastics and potentially the panel.
- ❗ If you are having trouble doing this, you can use a pry tool to help remove the sides of the monitor. This will help make opening a monitor that has never been serviced easier.

## Step 6 — Remove the screws on the IEC connector



- ⚠ At this point, you are almost to the power supply. Now is the time to decide if you can safely do this.
- With the back of the monitor off, remove the 2 screws on the IEC power connector.



## Step 7 — Remove the video connection screws

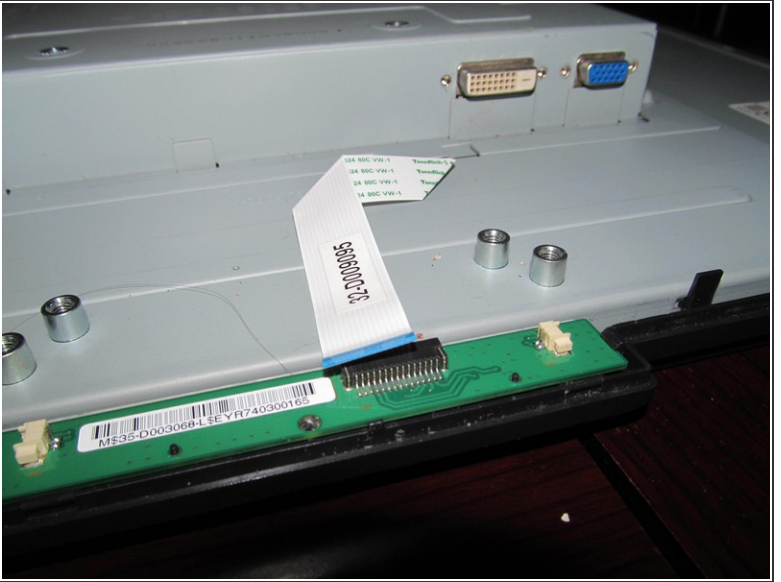


- ✦ If you do not have a Nut driver on hand, needlenose pliers can also be used for this step.
- Remove the 4 screw pins for the video cables from the monitor. Use a **5mm Nut** bit/driver to remove the screw pins from the power supply shield.

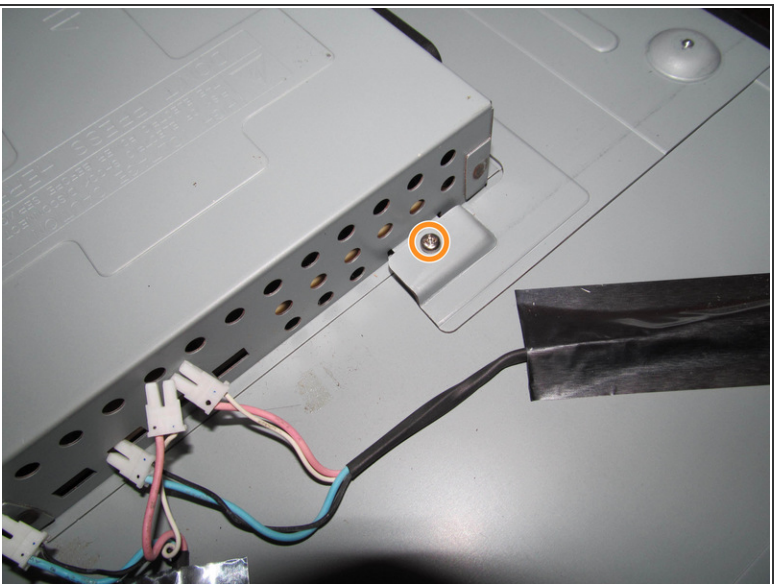
## Step 8 — Disconnecting the backlight cables



- Disconnect the CCFL tube cables from the power supply board.



- ## Step 10 — Remove the screws for the power supply shield



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## Step 11 — Removing the power supply shield




- On the right side of the monitor, remove the remaining screws holding the upper shield in place.
  - Lift the lower plate up while removing the power supply shield to remove it from the monitor. Once this is done, you will have access to the power supply.
- i** Removal of the lower shield is not required to access the power supply. However, removing it will make disassembly easier. If you choose to remove it, unclip the plastic tabs that are used to keep it in place.


## Step 12 — Identify the power supply





**!** If any of the capacitors have bulged, assume they have residual charge. Furthermore, handle the power supply from the sides and avoid contact with the capacitors.



 **In most cases, the filter capacitor on the primary side of the power supply does not need to be replaced. This capacitor should only be replaced IF it is bulging and you have a discharge tool on hand.**

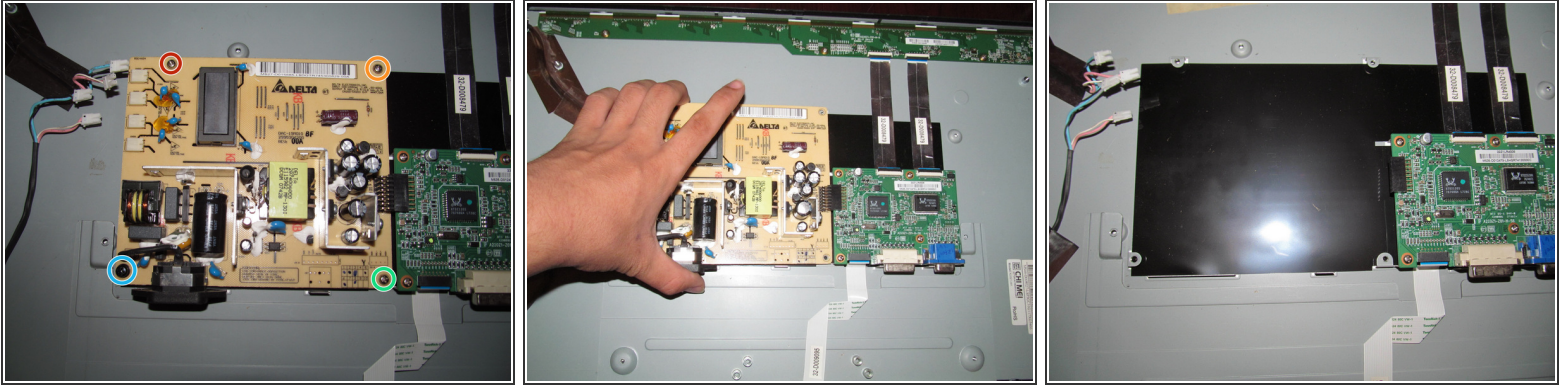
 **Original capacitor ratings (primary): 25V 1000uF (X2), 10V 1000uF (X1), 25V 220uF (X2)**

 **If you cannot find the original capacitors easily (or they are more expensive), it is okay to use capacitors with a higher uF and voltage rating. As long as they fit, you should not have any issues.**

 The capacitor marked in red is only on older power supply boards. Never revisions of the power supply used in this monitor no longer have this capacitor. Replacement is recommended if you have it, but is generally okay to ignore unless it looks like it is bulging or has leaking electrolytes.

- With the power supply shield removed from the monitor, identify the power supply. Write down which capacitors you need so you know what to get if you are buying them locally.

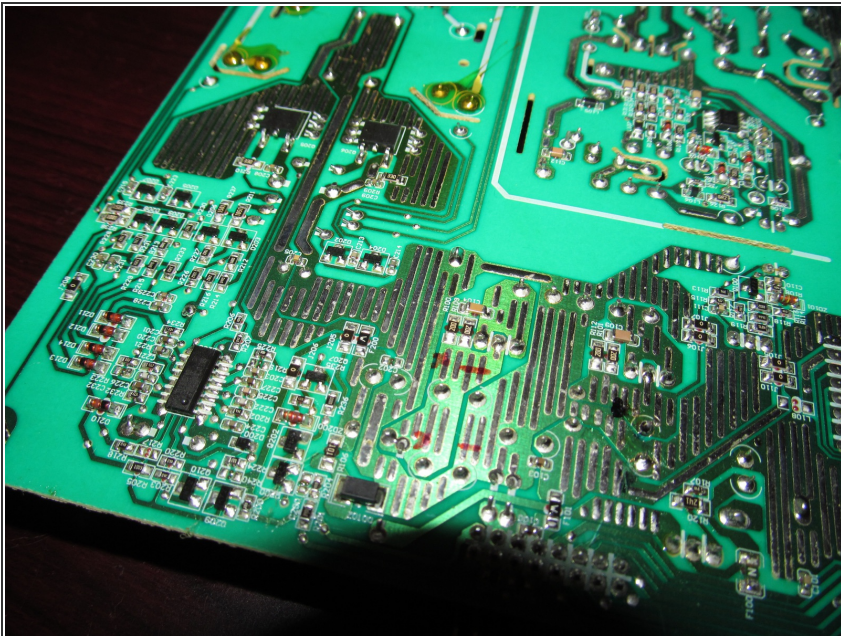
## Step 13 — Remove the power supply



**⚠** The black screw (marked in Blue) is a ground screw. It does not fit anywhere else. Do not lose this screw!

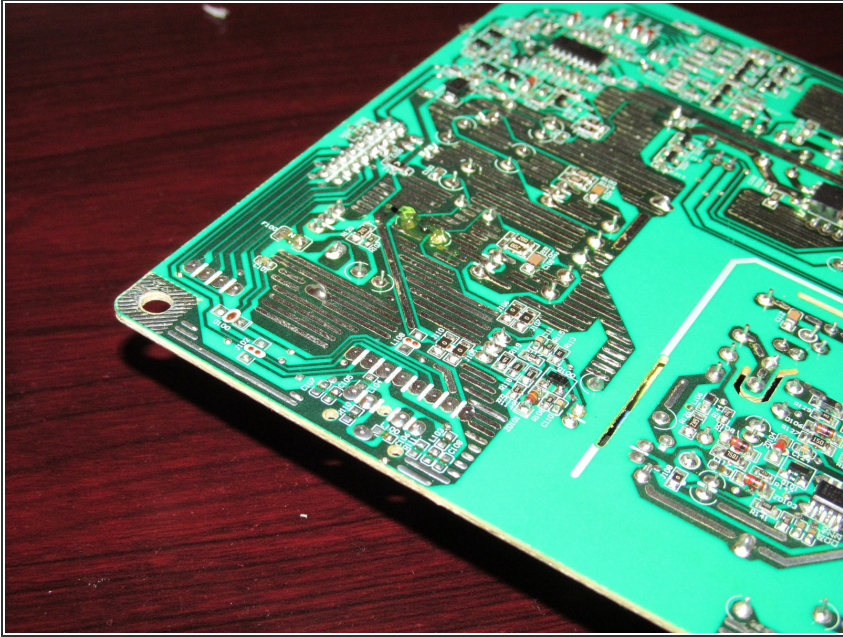
- i** Only lift the power supply up at a slight angle. Lifting it up too much can damage the power supply and potentially the video processing board.
- Remove the 4 screws from the power supply. Once this is done, lift the power supply up at a slight angle to clear the mounting holes so you can remove the power supply from the monitor.

## Step 14 — Mark the position of the old capacitors



- i** If you are unsure of the position of the capacitors, write the polarity on the solder mask as a reference using a permanent marker. If you install the capacitors incorrectly, they will explode when given power.  
**Note:** These marks will wear off when the capacitor is soldered in.

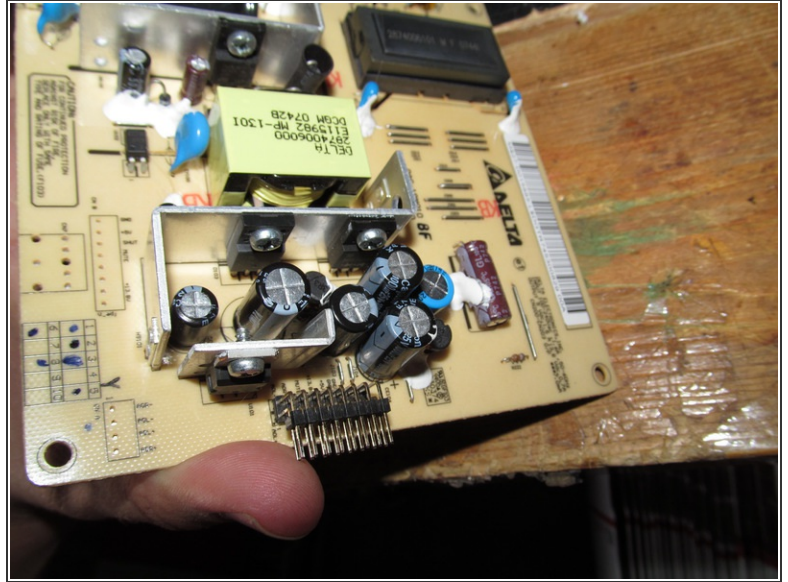
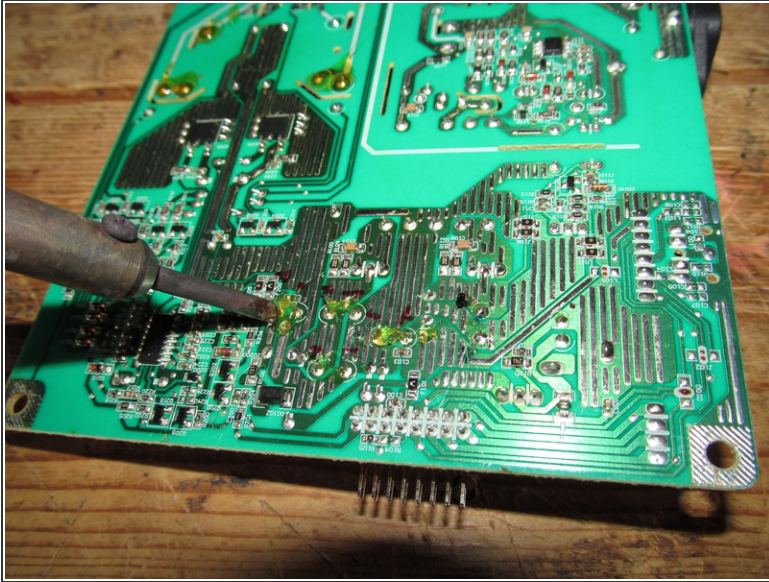
## Step 15 — Starting the repair: Add flux to the leads






- ⓘ If you do not have flux on hand, new solder can be used to help melt the original solder.
- ⓘ Only use as much flux as you need. Using more than you need will complicate board cleaning later.
- Put some flux on the leads of the old capacitors. This will help melt the old solder without the need to add new solder to the board.

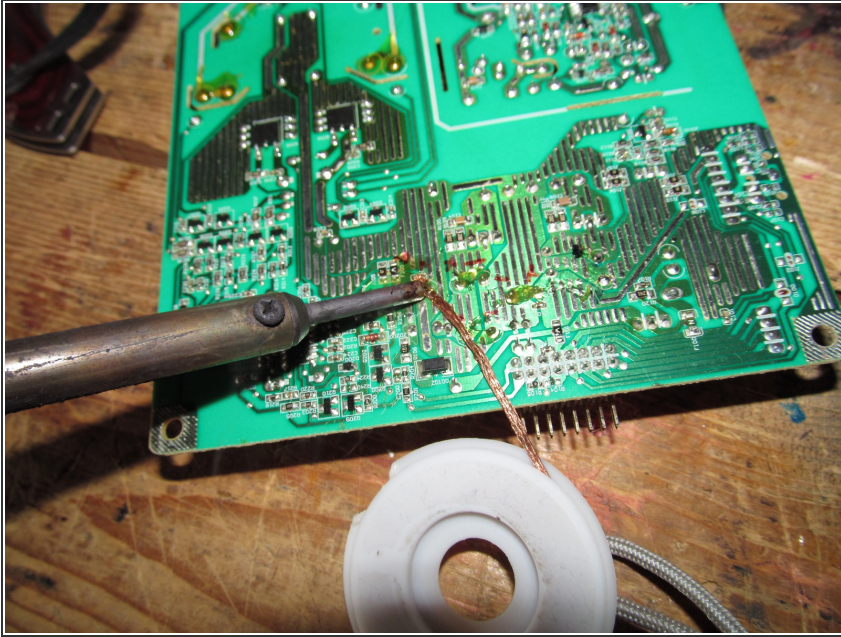


## Step 16 — Starting the repair: Removing the old capacitors



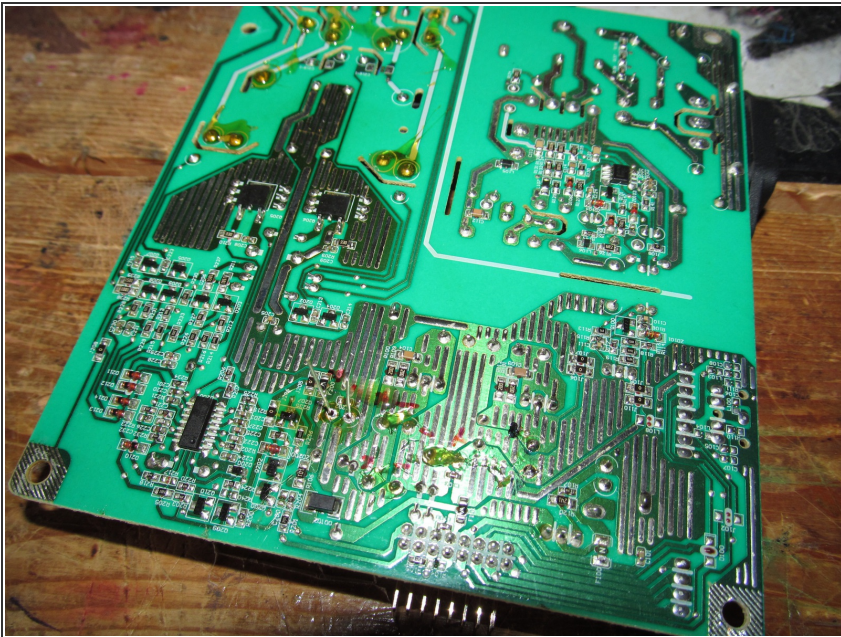
-  This guide does not teach you how to solder. If you need a how to on soldering, refer to this guide: [How To Solder and Desolder Connections](#)
-  Do not touch the soldering iron while removing the old caps! Hold the board at an angle you will not accidentally touch the soldering iron in any way.
-  When there is one or two failed capacitors, the rest are likely to follow. To avoid replacing the capacitors multiple times, it is better to replace them as a set.
- Take the board out to a place you can solder the new caps on. To remove the old capacitors from the board, heat one lead up at a time. Once this is done, remove that side of the capacitor. Do this for all of the capacitors you are replacing. Do not worry about the solder yet; we will clean this later.

## Step 17 — Starting the repair: Cleaning the solder



- Now it is time to clean the old solder. To do this, use a desoldering braid to remove excess solder for the capacitor group you are replacing. Put the desoldering braid on top of the pad, and heat it up with a soldering iron.
- Once all of the old solder you can get is clean and the hole can accept a new capacitor, lift the desoldering braid up. It is important to do this while the braid is hot or it will stick to the board.

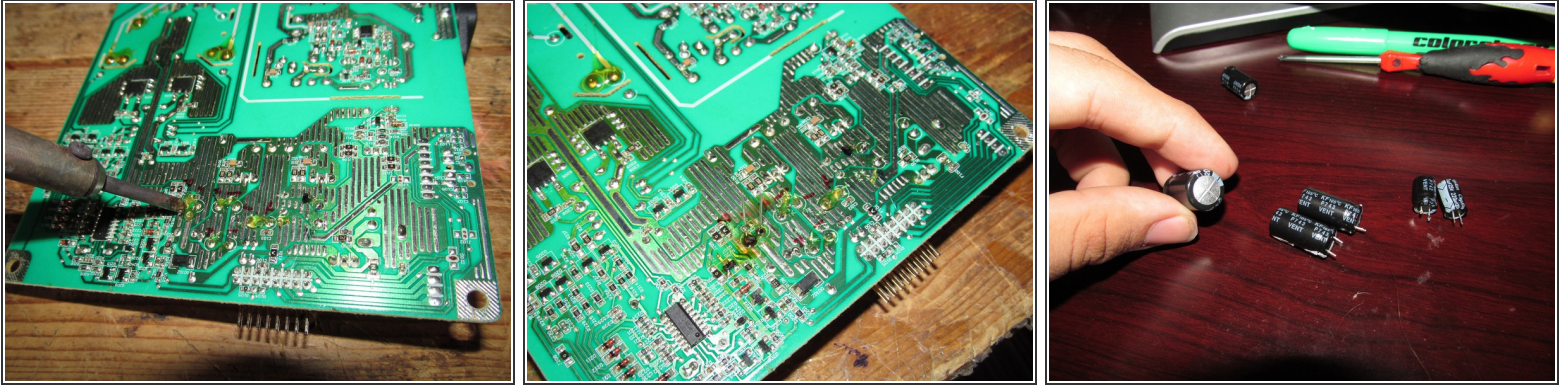
## Step 18 — Starting the repair: Installing brand new capacitors



- Install your new capacitors. Put your new capacitors in the corresponding holes and bend the leads back to keep them from falling out. **Before soldering, it is impotent to check the polarity and make sure it is correct. If they were installed wrong, correct it now.**

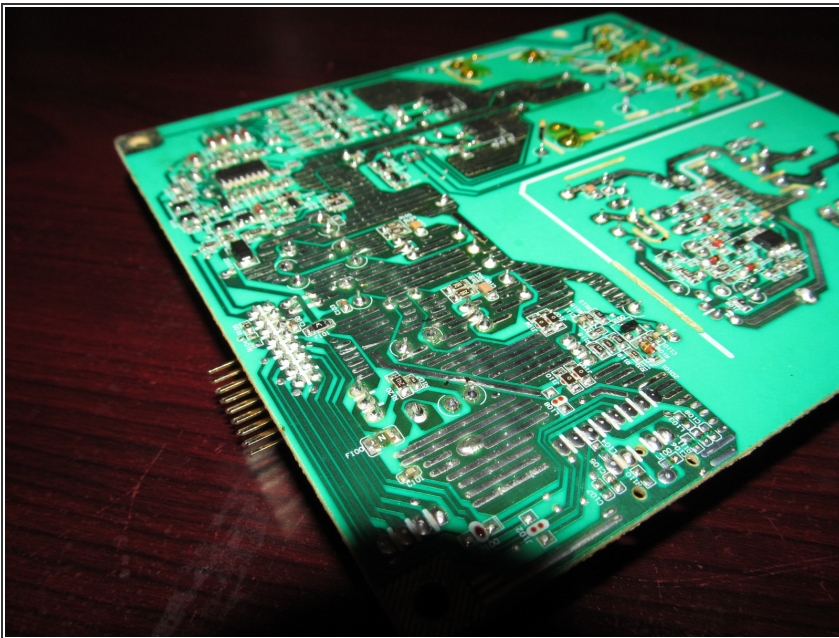


## Step 19 — Starting the repair: Soldering in new capacitors



- Once you have put the new caps in and verified the polarity, solder the new capacitors in. Once the capacitor is soldered in, cut the remaining lead. Repeat this with the rest of the capacitors.

## Step 20 — Cleaning the flux off of the board



- After verifying there is no cold solder joints, clean the board. The best way to do this is to use high concentration rubbing alcohol (91% or better).



## Step 21 — Testing the monitor



- Put the monitor back together and test the repair. If your repair worked, it should have stable power and produce an image reliably.

To reassemble your device, follow these instructions in reverse order.

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